

**IPS Quiz 3**

*Indicate the answer choice that best completes the statement or answers the question.*

	1	2	3	4	5	6	7	8	9	10
a										
b										
c										
d										
e										

**IPS Quiz 3**

1. To investigate whether or not sending text messages while driving impacts driving ability, we had 100 participants (50 men and 50 women) drive an obstacle course under one of the following conditions: 1) no texting while driving, 2) sending five text messages while driving, or 3) sending 10 text messages while driving. We measured the accuracy with which the subjects drove the obstacle course on a scale of 1 to 10 (1 = poor and 10 = excellent). What type of study is this?

- a. An observational study that is a sample survey
- b. An observational study that is not a sample survey
- c. An experiment
- d. A matched pairs study

**IPS Quiz 3**

2. Do people prefer tap water or bottled water? For this study, the two water samples are poured into two cups that look the same but are marked on the bottom. Each subject then tastes both water samples and rates the taste on a five-point scale (1 = poor to 5 = excellent). In order to make the experiment easier to conduct, you decide to pour the tap water into red cups and the bottled water into blue cups. Which of the following statements correctly explains what is wrong with this plan?

- a. Subjects may notice that all the red cups are bottled (or tap). Also, the cup color may bias the experiment by making subjects choose the color they prefer, rather than the taste.
- b. Subjects may prefer drinking out of bottles instead of cups.
- c. There is nothing wrong with this plan.

**IPS Quiz 3**

3. Only human subjects must give informed consent.

- a. True
- b. False

**IPS Quiz 3**

4. In order to assess the opinion of students at a large university about campus snow removal, a reporter for the student newspaper interviews the first 12 students she meets who are willing to express their opinions.

What set of students make up the sample?

- a. All those students favoring prompt snow removal
- b. All students at universities receiving substantial snow
- c. The 12 students interviewed
- d. All students at the University of Minnesota

**IPS Quiz 3**

5. In August 2006 a report was issued about an Internet poll conducted on behalf of the Oxygen Television Network. The survey included 1400 women and 700 men, aged 15 to 49. The following is part of a press release about the findings.

*Apparently if it's a gadget, women gotta have it, according to a survey done by Oxygen Media, an American cable network owned and operated by women. The Women's Watch: Girls Gone Wired survey released in August indicates that 77 per cent of women fancy a new plasma TV over a diamond solitaire necklace, 78 per cent would rather have a sleek new cell phone than shoes, and 86 per cent would prefer a new digital video camera over designer footwear.*

**IPS Quiz 3**

What can be said about these poll results?

- a. These results should be discounted, because there is no indication that a proper sample design was used, involving only chance, to select the participants.
- b. This poll was conducted over the Internet, so the results are likely to be biased toward those who are technologically inclined.
- c. This is a type of volunteer poll, so the results are not statistically valid and should be viewed with skepticism.
- d. The poll was restricted to a specific age group (15 to 49), and hence it isn't reasonable to ascribe the results to all women.
- e. All of the above

**IPS Quiz 3**

6. A medicine to remove the redness in eyes was tested in a group of 100 students. Each student took either the medicine or a placebo in both eyes. The specific treatment for each student was decided by flipping a coin. The participants in the study did not know whether heads or tails resulted in the medication. The participants were given some free time after receiving their drops. The researcher did not keep track of what they did in that free time. It turns out that many of the people receiving the medicine spent their time outside, and many of the people receiving the placebo spent their time inside. The results could now be biased, because the variable location (inside versus outside) is an example of a \_\_\_\_\_ variable.

- a. lurking
- b. confounding
- c. response
- d. control



**IPS Quiz 3**

7. To investigate whether or not sending text messages while driving impacts driving ability, we had 100 participants (50 men and 50 women) drive an obstacle course under one of the following conditions: 1) no texting while driving, 2) sending five text messages while driving, or 3) sending 10 text messages while driving. We measured the accuracy with which the subjects drove the obstacle course on a scale of 1 to 10 (1 = poor and 10 = excellent). What are two possible lurking variables in this experiment?

- a. The driving skill of participants and their skill at sending text messages
- b. The number of text messages sent while driving and the difficulty of the obstacles
- c. The men and women in the study

**IPS Quiz 3**

8. Approval of an Institutional Review Board is required for which of the experiments listed below?

- a. Studying the differences in the average prices among three supermarkets (Giant, Harris Teeter, and Safeway) by randomly selecting five items common to each store
- b. Studying whether visitors to the National Zoo are from out of town or local by asking them as they purchase a ticket to the zoo
- c. Performing a telephone survey and asking participants to rate the president's job performance so far
- d. Both A and B
- e. Both B and C

**IPS Quiz 3**

9. Researchers wished to determine whether a new experimental medication will reduce the symptoms of allergy sufferers without the side effect of drowsiness. To investigate this question, the researchers gave the new medication to 50 adult volunteers who suffer from allergies. Forty-four of these volunteers reported a significant reduction in their allergy symptoms without any drowsiness. What are the experimental units in this study?

- a. The researchers
- b. The 50 adult volunteers
- c. The 44 volunteers who reported a significant reduction in their allergy symptoms without any drowsiness
- d. The six volunteers who did not report a significant reduction in their allergy symptoms without any drowsiness

**IPS Quiz 3**

10. Does giving an incentive to improve exam scores really work? For example, consider the following treatments to measure the use of incentives.

Treatment 1: No incentive

Treatment 2: Incentive given to all

Treatment 3: Incentive given only if a certain score is received

For this experiment, assume all subjects are seniors at a university. What type of study would work best?

- a. An observational study
- b. An experiment

**IPS Quiz 3**

**Answer Key**

1. c

2. a

3. a

4. c

5. e

6. b

7. a

8. e

9. b

10. b

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

**IPS Quiz 3**